WHAT IS CLAIMED IS:

1. A semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the apparatus comprising:

a control unit that is adapted to supply a fixed bias current during a light emission off time, and start supplying a predetermined current that is less than a light emission threshold current right before a light emission time.

2. The semiconductor laser drive apparatus as claimed in claim 1, wherein the predetermined current corresponds to a current that is close to the light emission threshold current.

3. The semiconductor laser drive apparatus as claimed in

claim 1, wherein the predetermined current corresponds to a sum of the bias current and a current obtained from sampling a light emission state of the semiconductor laser.

4. The semiconductor laser drive apparatus as claimed in claim 1, wherein the control unit is adapted to determine a differential quantum efficiency at least in one of a case where power is turned on and a case where a job is to be started.

5. The semiconductor laser drive apparatus as claimed in claim 1, wherein the control unit is adapted to determine a differential quantum efficiency at predetermined time intervals.

6. The semiconductor laser drive apparatus as claimed in claim 4, wherein the control unit is adapted to determine the differential quantum efficiency based on a current for

obtaining a predetermined amount of light, and a current for obtaining a prescribed portion of the predetermined amount of light.

7. The semiconductor laser drive apparatus as claimed in claim 5, wherein the control unit is adapted to determine the differential quantum efficiency based on a current for obtaining a predetermined amount of light, and a current for obtaining a prescribed portion of the predetermined amount of light.

8. The semiconductor laser drive apparatus as claimed in claim 1, wherein the control unit includes a function for setting a difference between the light emission threshold current and the predetermined current that is less than the light emission threshold current.

9. The semiconductor laser drive apparatus as claimed in claim 8, wherein said difference is set by means of an external terminal.

10. The semiconductor laser drive apparatus as claimed in claim 8, wherein said difference is set to a value that is greater than or equal to the difference between a light emission current at a time of initialization and a light emission current at a time when an environment temperature is increased from the time of initialization.

11. The semiconductor laser drive apparatus as claimed in claim 1, wherein a supply time for supplying the predetermined current that is less than the light emission threshold current is arbitrarily set.

12. The semiconductor laser drive apparatus as claimed in claim 1, wherein a signal indicating a supply time for supplying the predetermined current that is less than the light emission threshold current is input, which signal is independent from a signal indicating a drive time for driving the semiconductor laser to emit a predetermined amount of light.

13. The semiconductor laser drive apparatus as claimed in claim 1, wherein the control unit includes:

a modulation current source that is adapted to supply a modulation current to the semiconductor laser based on a switching operation realized by a modulation signal;

a bias current source that is implemented parallel to the modulation current source and is adapted to supply the bias current having a fixed value; and

a control current source that is implemented parallel to the modulation current source and is adapted to supply a control current that is set by a sample hold circuit based on a switching operation realized by a threshold ON signal.

14. A semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the apparatus comprising:

a control unit that is adapted to refrain from supplying a current during a light emission off time, and start supplying a predetermined current that is less than a light emission threshold current right before a light emission time.

15. The semiconductor laser drive apparatus as claimed in claim 14, wherein the predetermined current corresponds to a current that is close to the light emission threshold current.

16. The semiconductor laser drive apparatus as claimed in claim 14, wherein the control unit is adapted to determine a differential quantum efficiency at least in one of a case where power is turned on and a case where a job is to be started.

17. The semiconductor laser drive apparatus as claimed in claim 14, wherein the control unit is adapted to determine a differential quantum efficiency at predetermined time intervals.

18. The semiconductor laser drive apparatus as claimed in claim 16, wherein the control unit is adapted to determine the differential quantum efficiency based on a current for obtaining a predetermined amount of light, and a current for obtaining a prescribed portion of the predetermined amount of light.

19. The semiconductor laser drive apparatus as claimed in claim 17, wherein the control unit is adapted to determine the differential quantum efficiency based on a current for obtaining a predetermined amount of light, and a current for

obtaining a prescribed portion of the predetermined amount of light.

20. The semiconductor laser drive apparatus as claimed in claim 14, wherein the control unit includes a function for setting a difference between the light emission threshold current and the predetermined current that is less than the light emission threshold current and is supplied right before the light emission time.

21. The semiconductor laser drive apparatus as claimed in claim 20, wherein said difference is set by means of an external terminal.

22. The semiconductor laser drive apparatus as claimed in claim 20, wherein said difference is set to a value that is

greater than or equal to the difference between a light emission current at a time of initialization and a light emission current at a time when an environmental temperature is increased from the time of initialization.

23. The semiconductor laser drive apparatus as claimed in claim 14, wherein a supply time for supplying the predetermined current that is less than the light emission threshold current is arbitrarily set.

24. The semiconductor laser drive apparatus as claimed in claim 14, wherein a signal indicating a supply time for supplying the predetermined current that is less than the light emission threshold current is input, which signal is independent from a signal indicating a drive time for driving the semiconductor laser to emit a predetermined amount of light.

25. The semiconductor laser drive apparatus as claimed in claim 14, wherein the control unit includes:

a modulation current source that is adapted to supply a modulation current to the semiconductor laser based on a switching operation realized by a modulation signal; and

a control current source that is implemented parallel to the modulation current source and is adapted to supply a control current that is set by a sample hold circuit based on a switching operation realized by a threshold ON signal.

26. A semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the apparatus comprising:

a control unit that is adapted to start supplying a predetermined current that is less than a light emission threshold current when a light emission command signal is received, and start supplying a modulation current after a predetermined time period passes from the time the predetermined current starts being supplied.

27. The semiconductor laser drive apparatus as claimed in claim 26, wherein the predetermined current corresponds to a current that is close to the light emission threshold current.

28. The semiconductor laser drive apparatus as claimed in claim 26, wherein the control unit is adapted to determine a differential quantum efficiency at least in one of a case where power is turned on and a case where a job is to be started.

29. The semiconductor laser drive apparatus as claimed in claim 26, wherein the control unit is adapted to determine a differential quantum efficiency at predetermined time intervals.

30. The semiconductor laser drive apparatus as claimed in claim 28, wherein the control unit is adapted to determine the differential quantum efficiency based on a current for obtaining a predetermined amount of light, and a current for obtaining a prescribed portion of the predetermined amount of light.

31. The semiconductor laser drive apparatus as claimed in claim 29, wherein the control unit is adapted to determine the differential quantum efficiency based on a current for obtaining a predetermined amount of light, and a current for obtaining a prescribed portion of the predetermined amount of light.

32. The semiconductor laser drive apparatus as claimed in claim 26, wherein the control unit includes a function for setting a difference between the light emission threshold current and the predetermined current that is less than the light emission threshold current and is supplied right before

the light emission time.

33. The semiconductor laser drive apparatus as claimed in claim 32, wherein said difference is set by means of an external terminal.

34. The semiconductor laser drive apparatus as claimed in claim 32, wherein said difference is set to a value that is greater than or equal to the difference between a light emission current at a time of initialization and a light emission current at a time when an environmental temperature is increased from the time of initialization.

35. The semiconductor laser drive apparatus as claimed in claim 26, wherein a supply time for supplying the predetermined current that is less than the light emission threshold current

is arbitrarily set.

36. The semiconductor laser drive apparatus as claimed in claim 26, wherein a signal indicating a supply time for supplying the predetermined current that is less than the light emission threshold current is input, which signal is independent from a signal indicating a drive time for driving the semiconductor laser to emit a predetermined amount of light.

37. The semiconductor laser drive apparatus as claimed in claim 26, wherein the control unit includes:

a modulation current source that is adapted to supply a modulation current to the semiconductor laser based on a switching operation realized by a modulation signal; and

a control current source that is implemented parallel to the modulation current source and is adapted to supply a control current that is set by a sample hold circuit based on a switching operation realized by a threshold ON signal.

38. An optical write apparatus comprising:

a semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the drive apparatus including a control unit that is adapted to supply a fixed bias current during a light emission off time, and start supplying a predetermined current that is less than a light emission threshold current right before a light emission time; and

a write unit that is adapted to realize optical writing on an image sustaining element by scanning a laser beam that is emitted from the semiconductor laser driven by the semiconductor laser drive apparatus using a polygon mirror.

39. The optical write apparatus as claimed in claim 38, further comprising:

a temperature detection unit that is adapted to detect a temperature of at least one of the semiconductor laser and a location in the vicinity of the semiconductor laser; and

an initialization unit that is adapted to perform initialization of the semiconductor laser drive apparatus based on the temperature detected by the temperature detection unit.

40. An optical write apparatus comprising:

a semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the drive apparatus including a control unit that is adapted to refrain from supplying a current during a light emission off time, and start supplying a predetermined current that is less than a light emission threshold current right before a light emission time; and

a write unit that is adapted to realize optical writing on an image sustaining element by scanning a laser beam that is emitted from the semiconductor laser driven by the semiconductor laser drive apparatus using a polygon mirror.

41. The optical write apparatus as claimed in claim 40,

further comprising:

a temperature detection unit that is adapted to detect a temperature of at least one of the semiconductor laser and a location in the vicinity of the semiconductor laser; and

an initialization unit that is adapted to perform initialization of the semiconductor laser drive apparatus based on the temperature detected by the temperature detection unit.

42. An optical write apparatus comprising:

a semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the drive apparatus including a control unit that is adapted to start supplying a predetermined current that is less than a light emission threshold current when a light emission command signal is received and start supplying a modulation current after a predetermined time period passes from the time the predetermined current starts being supplied; and

a write unit that is adapted to realize optical writing on an image sustaining element by scanning a laser beam that is emitted from the semiconductor laser driven by the semiconductor laser drive apparatus using a polygon mirror.

43. The optical write apparatus as claimed in claim 42, further comprising:

a temperature detection unit that is adapted to detect a temperature of at least one of the semiconductor laser and a location in the vicinity of the semiconductor laser; and

an initialization unit that is adapted to perform initialization of the semiconductor laser drive apparatus based on the temperature detected by the temperature detection unit.

44. An imaging apparatus comprising:

an optical write apparatus including a semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the drive apparatus including a control unit that is adapted to supply a fixed bias current during a light emission off time, and start supplying a predetermined current that is less than a light emission threshold current right before a light emission time, and a write unit that is adapted

to realize optical writing on an image sustaining element by scanning a laser beam that is emitted from the semiconductor laser driven by the semiconductor laser drive apparatus using a polygon mirror;

an image developing unit that is adapted to develop an image written on the image sustaining element by means of the optical writing apparatus; and

a recording unit that is adapted to record the image developed by the image developing unit on a recording medium.

45. The imaging apparatus as claimed in claim 44, further comprising an image input apparatus that is adapted to input image information based on which an image is recorded on the recording medium.

46. An imaging apparatus comprising:

an optical write apparatus including a semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to

emit light, the drive apparatus including a control unit that is adapted to refrain from supplying a current during a light emission off time, and start supplying a predetermined current that is less than a light emission threshold current right before a light emission time, and a write unit that is adapted to realize optical writing on an image sustaining element by scanning a laser beam that is emitted from the semiconductor laser driven by the semiconductor laser drive apparatus using a polygon mirror;

an image developing unit that is adapted to develop an image written on the image sustaining element by means of the optical writing apparatus; and

a recording unit that is adapted to record the image developed by the image developing unit on a recording medium.

47. The imaging apparatus as claimed in claim 46, further comprising an image input apparatus that is adapted to input image information based on which an image is recorded on the recording medium.

48. An imaging apparatus comprising:

an optical write apparatus including a semiconductor laser drive apparatus that modulates a semiconductor laser according to a modulation signal and induces the semiconductor laser to emit light, the drive apparatus including a control unit that is adapted to start supplying a predetermined current that is less than a light emission threshold current when a light emission command signal is received, and start supplying a modulation current after a predetermined time period passes from the time the predetermined current starts being supplied, and a write unit that is adapted to realize optical writing on an image sustaining element by scanning a laser beam that is emitted from the semiconductor laser driven by the semiconductor laser drive apparatus using a polygon mirror;

an image developing unit that is adapted to develop an image written on the image sustaining element by means of the optical writing apparatus; and

a recording unit that is adapted to record the image developed by the image developing unit on a recording medium.

49. The imaging apparatus as claimed in claim 48, further

comprising an image input apparatus that is adapted to input image information based on which an image is recorded on the recording medium.

50. A semiconductor laser drive method for modulating a semiconductor laser according to a modulation signal and inducing the semiconductor laser to emit light, the method comprising:

supplying a fixed bias current during a light emission off time; and

starting to supply a predetermined current that is less than a light emission threshold current right before a light emission time.

51. The semiconductor laser drive method as claimed in claim 50, further comprising setting a supply time for supplying the predetermined current that is less than the light emission threshold current to an arbitrary time.

52. The semiconductor laser drive method as claimed in claim 50, further comprising inputting a signal indicating a supply time for supplying the predetermined current that is less than the light emission threshold current, which signal is independent from a signal indicating a drive time for driving the semiconductor laser to emit a predetermined amount of light.

53. A semiconductor laser drive method for modulating a semiconductor laser according to a modulation signal and inducing the semiconductor laser to emit light, the method comprising:

refraining from supplying a current during a light emission off time; and

starting to supply a predetermined current that is less than a light emission threshold current right before a light emission time.

54. The semiconductor laser drive method as claimed in claim 53, wherein a supply time for supplying the predetermined current that is less than the light emission threshold current and is supplied right before the light emission time may be arbitrarily set.

55. The semiconductor laser drive method as claimed in claim 53, further comprising inputting a signal indicating a supply time for supplying the predetermined current that is less than the light emission threshold current, which signal is independent from a signal indicating a drive time for driving the semiconductor laser to emit a predetermined amount of light.

56. A semiconductor laser drive method for modulating a semiconductor laser according to a modulation signal and inducing the semiconductor laser to emit light, the method comprising:

starting to supply a predetermined current that is less than a light emission threshold current when a light emission

command signal is received; and

starting to supply a modulation current after a predetermined time period passes from the time the predetermined current starts being supplied.

57. The semiconductor laser drive method as claimed in claim 56, further comprising setting a supply time for supplying the predetermined current that is less than the light emission threshold current to an arbitrary time.

58. The semiconductor laser drive method as claimed in claim 56, further comprising inputting a signal indicating a supply time for supplying the predetermined current that is less than the light emission threshold current, which signal is independent from a signal indicating a drive time for driving the semiconductor laser to emit a predetermined amount of light.